

Notice of Allowability

Application No.

10/670,945

Examiner

Ehud Gartenberg

Applicant(s)

KLINE ET AL.

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/25/2003.
2. ☒ The allowed claim(s) is/are 31-33 and 49.
3. ☒ The drawings filed on 25 September 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Ehud Gartenberg
Primary Examiner
Art Unit: 3746

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with David Gordon on 6/11/2004.

The application has been amended as follows: Claim 30 has been canceled.

Claim 49 has been added.

49. A hybrid rocket motor comprising:

- a) a container having a fluid reactant therein and an outlet;
- b) a main combustion chamber containing a first solid reactant therein;
- c) an injector between said container outlet and said main combustion chamber, said injector having a face with a plurality of pathways through which said fluid reactant is injected into said main combustion chamber to be combusted with said first solid reactant, and lateral pathways through which said fluid reactant is injected into a precombustion chamber;
- d) said precombustion chamber surrounding said injector along at least a portion of its length; and
- e) a second solid reactant stored in said precombustion chamber;
said second solid reactant being combusted upon contact with said fluid reactant.

Claim 31 has been changed as follows:

On line 1 of the claim, "claim 30" has been changed to -- claim 49 --;

On line 3 of the claim, "said first fluid" has been changed to -- said fluid --.

Claim 32 has been changed as follows:

On line 1 of the claim, "claim 30" has been changed to -- claim 49 --;

On lines 2-3 of the claim, "wherein: said second fluid reactant is an oxidizer, and said second" has been changed to -- wherein said second --.

Claim 33 has been changed as follows:

On line 1 of the claim, "claim 30" has been changed to -- claim 49 --;

On line 3 of the claim "said main injector" has been changed to -- said injector --;

On line 6 of the claim "said main injector" has been changed to -- said injector --.

Allowable Subject Matter

2. Claims 49, 31-33 are allowed.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Muzzy 3,782,112.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ehud Gartenberg whose telephone number is 703/308-2634. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on 703/308-2675. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ehud Gartenberg
Primary Examiner
Art Unit 3746